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WAUKEGAN NURSERY.

WHOLESALE

CATALOGUE

—OF—

Evergreen & Ornamental

TREE SEEDLINGS, ETC.

CULTIVATED AND FOR SALE BY

ROBERT DOUGLAS & SONS,

WAUKEGAN, LAKE CO., ILL.

FOR THE FALL OF 1871, AND SPRING OF 1872.

OUR NURSERIES

Are located on the western shore of Lake Michigan, thirty-five miles north of Chicago, on the Milwaukee Division of the Chicago and Northwestern Railroad, (on which there are seven passenger trains each way, daily, between Chicago and Waukegan,) and in direct communication by railroad and steamboat with all the principal thoroughfares East and West.

Our stock is all remarkably well grown, and no inferior plants will be sent out.

WHOLESALE CATALOGUE,

For Fall of 1871 and Spring of 1872.

In presenting our Priced Catalogue for the Fall of 1871 and Spring of 1872, we would state that after nineteen years' experience in growing Evergreens from seed, packing and shipping millions annually, we are glad to be able to say that we ship them to arrive as safely and transplant as successfully as Apple or other deciduous trees.

Our packers are men who thoroughly understand their business, having had from fifteen to twenty years' experience in our employ.

We would call the attention of Importers to the fact that our Seedling Evergreens and Larches make a free growth the season they are transplanted, while imported trees rarely make a satisfactory growth until the second season after planting, and that ours are not so liable to be damaged on the route as trees that must necessarily be kept from a free circulation of air in crossing the Atlantic.

We can furnish one, two and three year old Norway Spruce, Scotch and Austrian Pine, and one and two year old European Larch, by the million, at special rates.

Our Seedlings are all assorted before shipping, and only first-class plants sent out.

THE SCOTCH PINE is the most rapid grower of all our hardy Evergreens — very valuable for forest planting. It is also valuable for planting in poor soil where other Evergreens will not flourish, and makes an excellent wind-break for sheltering orchards, buildings, etc.

THE NORWAY SPRUCE is so well known as being the best Evergreen for ornamental purposes that it is only necessary for us to say that it is also valuable for hedges, belts, screens, and for timber.

THE AUSTRIAN PINE. The Black Pine of Austria was introduced into Britain in 1835, and into this country a few years later, and is deservedly a favorite in ornamental grounds. It is very hardy, symmetrical and compact, presenting a dense mass of rich dark green foliage in winter.

It is also becoming a favorite for forest planting. Grigor says: "It is of robust growth particularly in soft soil of any quality. It carries a breadth along with its

upward growth, which adapts it for exposed ground. In its native country it sometimes attains the height of 100 feet, and its timber is strong and resinous."

MOUNTAIN PINE (*Pinus Montana*), is a beautiful little tree or bush-foliage very dense, and of a rich dark green, valuable for ornamental purposes. It is perfectly hardy in the most exposed situations. It can be used with good effect to cover barren and unsightly bluffs and sandy knolls, railroad cuts, etc.

THE EUROPEAN OR TYROLESE LARCH (*Larix Europa*), of De Candolle, is undoubtedly the most valuable timber tree for extensive planting, combining the durability of the Red Cedar with rapidity of growth, extreme hardiness, freedom from disease, and adaptability to almost every variety of soil.

It has proved more profitable in Great Britain than any other timber tree, and is now planted more extensively than all others combined. A. J. Downing was so favorably impressed with the value of this tree as he saw it in Europe, that he devoted several pages in his "Landscape Gardening," published in 1849, to its description, from which we quote as follows:

"It is highly valuable to produce effect or shelter suddenly on portions of an estate too thin or meagre in their soil to afford the sustenance necessary to the growth of many other decidious trees.

"The Larch is the great timber tree of Europe.

"Its wood is remarkably strong and durable, exceeding in those qualities the best English oak. To these it is said to add the peculiarity of being almost uninflammable and resisting the influence of heat for a long time.

"The wood is also recommended for the decks of vessels and the masts of ships, as it is little liable either to fly in splinters during an engagement or to catch fire readily.

"In Great Britain immense plantations of this tree are made with a view to profit, and as yet nothing like rearing trees for timber has been attempted here. Nevertheless the time must come when our attention will necessarily be turned in this direction. When such is the case it is probable the Larch will be found to be as much an object of profit on this side of the Atlantic as on the other.

"Indeed, we are much inclined to believe that thousands of acres of our sterile soils in some districts might now be profitaby planted with this tree.

"In Scotland, the Larch was first introduced in the year 1738, when eleven plants were given to the Duke of Athol, who afterwards, struck by the rapidity of their growth and the excellence of their timber, planted thousands of acres of them. The Larch is a very quick grower. Between 1740 and 1744 eleven trees were planted at Blair, the girths of which, at growths of seventy-three to seventy-six years, ranged from eight feet two inches to ten feet.

"We find by the Duke of Athol's tables of measurement that trees planted by him in 1743 were nine feet three inches in circumference when measured at four feet from the ground, in 1795.

"The Larch is unquestionably the most enduring timber that we have. It is remarkable that while the red wood or heart wood is not formed at all in the other resinous trees till they have lived a good many years, the Larch, on the contrary, begins to make

it soon after it is planted, and while you may fell a Scotch Fir of thirty years old and find no red wood in it—you can hardly cut down a young Larch large enough for a walking stick without finding just such a proportion of red wood compared to its diameter as a tree, as you will find in the largest Larch tree in the forest compared to its diameter.

"To prove the value of the Larch as a timber tree, several experiments have been made in the River Thames.

"Posts of equal thickness and strength, some of Larch and others of Oak, were driven down facing the river wall where they were alternately covered with water by the effect of the tide, and then left dry by its fall.

"This species of alternation is the most trying of all circumstances for the endurance of timber, and accordingly the oak posts decayed and were twice renewed in the course of a very few years, while those that were made of the Larch remained altogether unchanged."

Loudon devotes several pages in his "Arboretum" to the durability and value of the Larch. He says:

"It is much used in Switzerland for shingles and vine props. For the latter purpose it is found the most durable of all kinds of wood. The vine props of it are never taken up; they remain fixed for an indefinite number of years, and see crop after crop of vines spring up, bear their fruit, and perish at their feet, without showing any signs of decay. In most cases the proprietors of the vineyards are perfectly ignorant of the epoch when these props were first placed there; they received them in their present state from their fathers, and in the same state will transmit them to their sons. Props made of Silver Fir for the same purpose will not last more than ten years."

Grigor, in his "Arboriculture," says:

"The Larch has been found to produce a greater quantity of valuable timber than any other tree.

"The growth of every kind of plant is interrupted, to some extent, by being transplanted, but no kind will undergo the operation more successfully, or take to the ground more readily than a healthy Larch. It flourishes in soils of very opposite qualities, from the dry and sandy to the wet and clayey, but in the presence of springs or moisture in the soil, it is absolutely necessary that the water have a free exit.

"No tree is so valuable as the Larch in its fertilizing effects arising from the richness of its foliage, which it sheds annually.

"In a healthy wood the yearly deposit is very great; the leaves remain, and consume on the spot where they drop, and, where the influence of the air is admitted (after thinning), the space becomes clothed in a vivid green, with many of the finest kinds of natural grasses, the pasture of which is highly reputed in dairy management.

"Within the last twenty-eight years a considerable extent of plantation has also been formed on the sands of Culbin. These sands occupy several thousand acres of the northwest corner of the county of Moray, Scotland, and are composed of small hills of sand, ranging from 20 to 140 feet high, the surface of which is ever changing by the influence of the wind.

"R. Grant, Esq., of Kincorth, was the first to reclaim part of the sands in this quarter by plantation, and all the sandy space on his property (about 70 acres) is now completely covered with thriving wood. These plantations, consisting of Larch and Scotch Pine, now (1865) from twenty to twenty-eight years of age, range from twenty-five to forty-five feet in height, and are very vigorous.

"They yield valuable thinnings, and, although they stand on pure drift sand, give promise of producing heavy timber at a period not far distant.

"The success of the Kincorth plantations, while they were only a few years old, induced the proprietor of Moy, who owns several thousand acres of the adjoining sands of Culbin, to form plantations thereon."

De Candolle considers it less liable to disease than any other Alpine tree, and that both in its native habitats and under cultivation, it is of a remarkably healthy and vigorous constitution.

In Great Britain the Larch has become so popular for railroad ties that the forests of Scotland are taxed to their utmost to supply the demand.

We have good reasons for believing that the European Larch will be as healthy and grow more rapidly in this country than in Europe.

Probably the largest tree of this species in this country is one mentioned by Thos. Meehan, Esq., in his "American Hand-book of Ornamental Trees," as measured by him in the Bartram Botanic Garden, at Philadelphia, in 1853, viz.: 108 feet high, and 5 feet 4 inches in circumference.

Arthur Bryant, Sen., Princeton, Ill., and A. R. Whitney, Franklin Grove, Ill., have European Larch 12 to 15 years planted, standing in nursery rows, and adjoining American Larch trees that they have far outstripped, both in height and breadth.

Two trees on our grounds, fifteen years planted, each measure 45 inches in circumference at the collar. One tree, nine years from seed, transplanted at one year old, measures 27 inches; and one in its fifth year from seed, accidentally left in seed bed, measures 9 inches in circumference at the collar.

Trees upon the grounds of E. Y. Teas, Richmond, Ind., and Jno. C. Teas, Raysville, Ind., 10 years planted, are 30 feet and upwards in height, and 10 to 12 inches in diameter.

D. C. Scofield, Elgin, Ill., has trees twelve years planted, and same size as the preceding.

Samuel Edwards, of Lamoille, Ill., has fine specimens among his noble Evergreens, and wherever planted it seems to be a favorite.

Wishing to ascertain whether the Larch is as well adapted to a more southern climate, we corresponded with some of the most experienced tree planters in the vicinity of St. Louis and Louisville, and every one we corresponded with gave a very favorable account of it.

An experienced and extensive planter near the latter city says:

"I planted 50 to 100 Larches some 18 years ago. When planted they were 3 or 4 feet high. They have done well, and are most vigorous and beautiful.

"Through mistake one of my men cut down one of the largest, and I carefully measured it. It was 18 inches across the stump (say a foot from the ground) and 35 feet high, body straight as an arrow. My Larches were transplanted repeatedly, and the limbs are from the ground up, and certainly as beautiful as a tree can be. My experience with the Larch is that it should be planted very early in the spring (if spring planted), but I far prefer fall planting. Yet, in some soils, they will be thrown up by frosts unless mulched."

We noticed a European Larch in a thickly settled part of the city of Milwaukee, Wis., that is of larger growth than any we have ever seen in Illinois.

Four by four feet is the distance recommended for planting the Larch and other coniferous trees in forest on the prairies, as, at that distance apart, they can be worked both ways with the cultivator for 2 or 3 years. The side branches will by that time shade the ground and destroy the undergrowth, and no more cultivation be required.

We would recommend plowing up to the trees the first autumn after planting, plowing the furrows back late in the spring.

Most European planters prefer mixing Pines with the Larches, as this adds to the appearance of the plantation, and gives a choice in thinning.

We would advise planting a few rows of the admixture on the margin of the plantation, at least, and in all cases where the plantations are placed along the outer boundaries of the farm, we would recommend a free admixture of Evergreens.

A clean corn stubble, from which the corn stalks have been removed, would be a suitable place for planting a Larch forest in the fall; planting a tree close up to the north side of each cornhill, the stubble (which should be left about 2 feet high) making a good protection through the winter. A good spadeful of earth should be laid up to each tree, after it is planted, to prevent its heaving by the frost.

Fall planting should be practiced only on land from which water will pass off freely.

When spring planting is practiced the land should be plowed in the fall, as the Larch ought to be planted early in the spring.

When the land cannot conveniently be prepared in autumn, or planted early in spring, the trees should be kept in a cool place, to keep them from vegetating, till ready to plant. We have houses erected specially for that purpose, and transplanted 200,000 Larches in the early part of last May, with remarkable success. We can hold them till that time for parties who cannot plant sooner, but we would strongly advise planting before the middle of April.

Tree planting being still in its infancy in this country, many persons wishing to plant are at a loss to know the kinds best adapted to their soils, and how and when to plant them.

We would advise all such persons to procure Bryant's work on Forest and Ornamental Tree Planting. Mr. Arthur Bryant, of Princeton, Ill., President of the Illinois State Horticultural Society, is the author. He is so well known as having had from 35 to 40 years' experience in tree planting in the West that it is needless to say this will be a standard work among Western tree planters. This work will be issued in September by Henry T. Williams, editor of *The Horticulturist*, No. 5 Beekman street, New York.

WHOLESALE CATALOGUE.

The terms of payment must invariably be cash, or satisfactory security before shipment.

Particular attention paid to packing, for which a reasonable charge will be made.

We have by far the largest stock of Seedling Evergreens ever offered in the United States, all grown from seeds on our own grounds, and very fine.

As parties are advertising Evergreens gathered in the woods as Evergreen Seedlings we often receive inquiries why we cannot sell as low as others.

To stop all such inquiries, we would here remark, that we are not in competition with trees that have never been in the nursery, but that we are always ready to sell first-class stock at as low rates as it can be grown, with a fair profit; and we have so far found that the demand more than equals our supply.

Evergreen Trees Twice Transplanted.

	Per 100.	*Per* 1,000.
NORWAY SPRUCE, 18 inches to 2 feet (fine)	$15 00	$140 00
" " 15 to 18 inches (fine)	11 00	100 00
" " 12 to 15 inches "	8 00	70 00
" " 10 to 12 inches "	5 00	40 00
" " 6 to 10 inches "	3 00	25 00
SCOTCH PINE, 12 to 18 inches (fine)	8 00	70 00
" " 6 to 12 inches "	5 00	40 00
AUSTRIAN PINE, 12 to 15 inches (fine)	10 00	90 00
" " 6 to 12 inches "	6 00	50 00
WHITE SPRUCE, 12 to 18 inches "	12 00	.....
" " 6 to 12 inches "	6 00	.....
AMERICAN ARBOR-VITÆ, 3 feet, clipped (fine)	15 00	125 00
" " " 2 to 3 feet "	12 00	100 00
" " " 1½ to 2 feet "	10 00	80 00
" " " 1 to 1½ feet "	7 00	60 00

Evergreen Trees Once Transplanted.

	Per 100.	*Per* 1,000.	*Per* 10,000.
NORWAY SPRUCE, 12 to 18 inches	$5 00	$40 00	$350 00
" " 8 to 12 "	3 00	25 00	225 00
" " 4 to 8 "	1 50	12 00	100 00
SCOTCH PINE, 12 to 24 inches	4 00	30 00	250 00
" " 8 to 12 "	3 00	20 00	175 00
" " 6 to 8 "	2 00	15 00	125 00
AUSTRIAN PINE, 6 to 12 inches	3 00	25 00	200 00
" " 4 to 6 "	2 00	13 00	112 00
MOUNTAIN PINE (dwarf), 3 to 5 inches	3 00	20 00	.....

Evergreen Seedlings.

We only recommend our one year old Evergreen Seedlings to Nurserymen who understand bedding out small plants. They will require shade the first season. Two years old, three to six inches, may be planted in rows twelve to eighteen inches apart, and worked with the hoe. The earth should be drawn up to the plants at the last hoeing of the first season, to prevent heaving in winter. In two years they will be nice stocky trees, averaging about one foot in height, and may then be planted in nursery rows three or four feet apart, or in shelter belts and hedges.

Three years old, six to nine inches, may be planted immediately into three or four feet rows.

When the trees are received from nurseries the boxes should be immediately unpacked, and the roots dipped in a puddle made of rich mellow soil, about the thickness of paint. Place them in a cool shaded place till ready to plant, and while planting expose the roots as little as possible. If not ready to plant for a few days keep the *roots moist* and *tops dry*. Set the trees a little deeper than they stood in the nursery, and tread the earth firmly over the roots when planting — (*this is very essential*), — drawing a little loose earth up to the trees to prevent the surface from baking.

The above treatment will also apply to transplanted trees.

	Per 100.	*Per* 1,000.	*Per* 10,000.	*Per* 100,000.
NORWAY SPRUCE, 1 year	$.....	$ 3 00	$ 25 00	$ 200 00
" " 2 yrs., 3 to 6 in	.....	6 00	50 00	400 00
" " 3 yrs., 6 to 9 in., root pru'd	2 00	13 00	120 00	1100 00
" " 9 to 12 in., root pru'd	2 50	20 00	190 00	.....
WHITE SPRUCE, 2 yrs., 3 to 6 in	.....	12 00	110 00	.....
SCOTCH PINE, 1 yr	.....	5 00	40 00	300 00
" " 2 yrs., 4 to 6 in	.....	8 00	70 00	600 00
" " 3 yrs., 6 to 9 in	2 00	12 00	110 00	1000 00
AUSTRIAN PINE, 1 yr	.....	5 00	40 00	300 00
" " 2 yrs., 3 to 6 in	.....	8 00	70 00	600 00
" " 3 yrs., 6 to 9 in	2 00	12 00	110 00	1000 00
MOUNTAIN PINE (dwarf), 2 yrs., 2 to 4 in	2 00	15 00	.....	.....
" " (dwarf), 3 yrs., 3 to 5 in	3 00	20 00	.....	.....
TABLE MOUNTAIN PINE (Pinus Pungens), 1 yr., 2 to 3 in	3 00	20 00	.....	.....
TABLE MOUNTAIN PINE (Pinus Pungens), 2 yrs., 4 to 6 in	4 00	30 00	.....	.....
PITCH PINE (Pinus Rigida), 2 yrs., 4 to 6 in	2 00	10 00	.....	.....

We have a large stock of American Arbor Vitæ, Balsam Fir, White Pine, etc., etc., 1 year old, in seed beds, but do not recommend planting them until two years old.

European Larch (Transplanted).

	Per 100.	*Per* 1,000.	*Per* 10,000.
12 to 18 inches	$2 00	$16 00	$150 00
6 to 10 inches	1 50	10 00	90 00

European Larch Seedlings.

	Per 100.	*Per* 1,000.	*Per* 10,000.	*Per* 100,000.
3 years, 18 to 36 inches	$3 00	$20 00	$.....	$.....
2 years, 6 to 18 inches	1 00	8 00	75 00	650 00
1 year, 3 to 6 inches:	.....	4 00	35 00	300 00

The European Larch should be planted as early in the spring as possible, as it commences growth at a very low temperature. If done *early*, no tree will bear transplanting better. It should never be planted on low, wet ground. It grows well on all rich uplands, and even on land too dry and poor for almost any other tree, except Scotch and Red Pines.

European Mountain Ash (Transplanted).

	Per 100.	*Per* 1,000.
5 to 6 feet	$12 00	$100 00
3 to 5 feet	8 00	70 00
2 to 3 feet	4 00	30 00
1 to 2 feet	3 00	20 00

Ornamental Tree Seedlings.

	Per 100.	*Per* 1,000.
EUROPEAN MOUNTAIN ASH, 10 to 15 inches	$2 00	$12 00
" " " 6 to 10 inches	1 50	8 00
" " " 3 to 5 inches	.....	5 00
YELLOW BIRCH, 2 yrs., 1 to 2 feet	2 00	15 00
" " 2 yrs., 6 to 12 inches	1 00	8 00
NORWAY MAPLE, 1 year	2 00	12 00
EUROPEAN ALDER, 1 year, 4 to 8 inches	2 00	12 00

Siberian Crab Trees.

We can furnish 20,000 Transcendent and Hyslof Crab, 2 and 3 years old, suitable for shipping, at very low rates, as we wish to clear the ground.

Having experimented with Pear on Mountain Ash, since 1848, we are convinced that the Mountain Ash is a far better stock than the Quince for western soils, being perfectly hardy.

We have 15,000 Pear on Mountain Ash, 2 years old, from graft, and 50,000 Pear on Mountain Ash, 1 year old, from graft, mostly Bartlett.

Flemish Beauty and Buerre d'Anjou, at the following rates:

	Per 100.
PEAR ON MOUNTAIN ASH, 3 to 5 feet	$10 00
" " " " 1 to 3 feet	10 00

We have 10,000 two years, and 20,000 one year, from graft, that we offer by the 100 to those desirous of testing them, at the following rates:

	Per 100.
2 years from graft, 2½ to 4 feet	$18 00
1 year from graft, 1 to 2 feet	12 00

Evergreen and Ornamental Tree Seeds.

	Per ounce.	*Per lb.*
AUSTRIAN PINE	$ .25	$2 50
WHITE PINE	.50	5 00
SCOTCH PINE	.25	2 50
MOUNTAIN PINE	.50	5 00
BALSAM FIR	.50	4 00
NORWAY SPRUCE	.25	1 50
AMERICAN WHITE SPRUCE	.50	6 00
EUROPEAN (TYROLESE) LARCH	.25	2 50
AMERICAN ARBOR VITÆ	.50	4 00
HEMLOCK SPRUCE	.50	5 00
YELLOW BIRCH	.25	3 00
WHITE BIRCH	.25	3 00
BLACK BIRCH	.25	3 00
CEMBRAN PINE	.25	2 00
CORSICAN PINE	.25	3 50
EUROPEAN SILVER FIR	.25	1 50
NORWAY MAPLE	.12	1 00
RED ALDER	.25	3 00
WHITE ALDER	.25	3 00

Fruit Tree Seeds.

PEAR SEEDS	Per lb.	Per 100 lbs.
APPLE "	Per. bu.	" " "

The above Seeds are all new and fresh, and will be ready for delivery in December or January next.

Apple and Pear Seeds require freezing or soaking before sowing in spring.

Larch and Evergreen Seeds may be sown from opening of ground until May 1st, in beds 4 feet wide; sow broadcast and rake in, after which shade with lath frames or brush.